

CLAIMS

1. A device for current reversal, in particular a commutator (1; 101; 201) with a preformed, more or less cylindrical outer cover (3; 103; 203; 303) having an axis of rotation (2; 102; 202; 302) and electrically conductive current reversal or commutator segments (4; 104; 204; 304) which may be fastened on the outer cover (3; 103; 203; 303) by means of a bonding agent (5; 105; 205; 305) applied more or less between it and the segments (4; 104; 204; 304), the outer cover (3; 103; 203; 303) and the segments (4; 104; 204; 304) having interactive means (3', 3", 4"; 4a"; 106, 107, 309, 311) for positioning and orienting the segments (4; 104; 204; 304) relative to the outer cover (3; 103; 203; 303), and the segmental surface (308) of the segments (4; 104; 204; 304) resting on a jacket surface of the outer cover (3; 103; 203; 303), opposite end sections being bent as positioning means (309, 311) opposite the segmental surface (304), and a stud (310) bent on one end of the segment (304) being provided for connection of the coil winding, *characterized in that* both positioning means (309, 311) are planar when in the bent state and *in that* the bent planar positioning means (309, 311) are inserted into corresponding means on the front of the outer cover (303) and are thereby positioned and oriented.

2. A device as specified in Claim 1, *wherein* the two positioning means (309, 311) have lugs each bent at a right angle

of its end facing away from the segmental surface (308) and extending over the plane of the front surface of the outer cover (303).

3. A device as specified in Claim 1 or 2, *wherein* the segments (304) are additionally fastened on the outer cover (303) by a bonding layer (305).

4. A device as specified in one of Claims 1 to 3, *wherein* the bonding agent (5; 105; 205; 305) is an adhesive layer, preferably an adhesive layer of an epoxy resin, polyurethane resin, or phenol resin.

5. A device for current reversal, in particular a commutator (101; 201) with a preformed, more or less cylindrical outer cover (103; 203) having an axis of rotation (102; 202) and electrically conductive current reversal or commutator segments (104; 204) which may be fastened on connection means (103'; 203') mounted between the segments (104; 204) and the outer cover (103; 203) by means of a bonding agent (105; 205), the outer cover (103; 203) and the segments (104; 204) having interactive means for positioning and orienting the segments (104; 204) relative to the outer cover (103; 203), *characterized in that* there is mounted, in the frontal bottom surface of the cupshaped connection means (103'), a recess (106) shaped as a keyhole into which a corresponding projection (107), in the shape of a matching pin or bar, of a preformed outer cover core is inserted

and as a result the connection means (103') is fastened on the preformed outer cover core by clamping action.

6. A device as specified in Claim 5, *wherein* the electric connection means (103') is fastened to the outer cover (103') by means of an electrically insulating or an electrically conductive bonding layer (103"), for example, by an adhesive, soldered, or welded layer.

7. A device as specified in Claim 5 or 6, *wherein* a circular segmental disk (104) consisting of carbon or containing carbon is fastened by a bonding agent (105) on the frontal surface of the connection means (103') facing away from the outer cover (103), and the segmental disk (104) is isolated relative to the axis of rotation (102) by radial cuts in the segments (104; 204).

8. A device as specified in one of Claims 1 to 7, *wherein* the bonding agent (5; 105; 205; 305) is a soldered or welded layer, in particular a soft, hard, or glass solder layer or an ultrasound, friction, or electrode welded layer.

9. A process for manufacture of a current reverser, a commutator in particular (1; 101; 201) as specified in one of Claims 1 to 8, *wherein* a plurality, preferably all, of the segments (4; 104; 204; 304) to be fastened to the outer cover (3; 103; 203; 303) are delivered simultaneously to the outer cover (3; 103; 203; 303).